

FILING RECEIPT



0756-864 YqF  
UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
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Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTORNEY DOCKET NO.	DRWGS	TOT CL	IND CL
08/051,313	04/23/93	2507	\$ 932.00	0756-864	5	20	6

SIXBEY, FRIEDMAN, LEEDOM & FERGUSON  
2010 CORPORATE RIDGE, STE. 600  
MCLEAN, VA 22102

Receipt is acknowledged of the patent application identified herein. It will be considered in its order and you will be notified as to the examination thereof. Be sure to give the U.S. SERIAL NUMBER, DATE OF FILING, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this transmittal.

Applicant(s) YASUHIKO TAKEMURA, KANAGAWA, JAPAN.

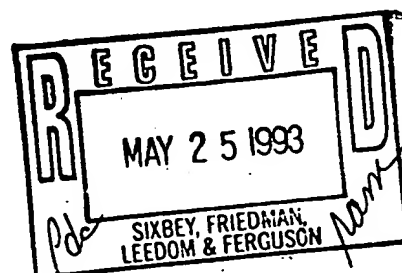
FOREIGN/PCT APPLICATIONS-JAPAN

4-135865

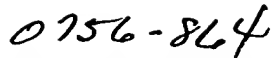
04/28/92

TITLE  
ELECTRO-OPTICAL DEVICE AND METHOD OF DRIVING THE SAME

PRELIMINARY CLASS: 359



(see reverse)



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Patent and Trademark Office**  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

SIXBEY, FRIEDMAN, LEEDOM & FERGUSON, P.C  
GERALD J. FERGUSON, JR.  
2010 CORPORATE RIDGE  
SUITE 600  
MCLEAN, VIRGINIA 22102

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT BRANCH OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE U.S. PATENT AND TRADEMARK OFFICE ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT ASSIGNMENT PROCESSING SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT BRANCH, NORTH TOWER BUILDING, SUITE 10C35, WASHINGTON, D.C. 20231


DOC DATE: 04/16/93

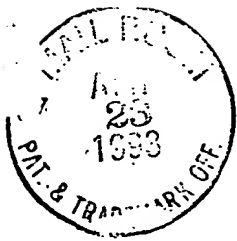
RECORDATION DATE: 04/23/93    NUMBER OF PAGES 003    REEL/FRAME 6532/0466

DIGEST : ASSIGNMENT OF ASSIGNORS INTEREST

ASSIGNEE:  
SEMICONDUCTOR ENERGY LABORATORY CO., LTD.  
398, HASE, ATSUGI-SHI  
KANAGAWA-KEN 243 JAPAN

SERIAL NUMBER	8-051313	FILING DATE	04/23/93
PATENT NUMBER		ISSUE DATE	00/00/00


 JUN 23 1993  
 SIXBEY, FRIEDMAN,  
 LEEDOM & FERGUSON



40-581

08 051313

## RECORDATION FORM COVER SHEET

Docket: 0756-864

To the Honorable Commissioner of Patent and Trademarks. Please record the attached original documents or copy thereof.

1. Name of conveying party: Yasuhiko TAKEMURA

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

2. Name and address of receiving party(ies):

Name: Semiconductor Energy Laboratory Co., Ltd.

Street Address: 398, Hase, Atsugi-shi, Kanagawa-ken 243 Japan

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

Additional name(s) & addresses(es) attached? ☐ Yes ☐ No

3. Name of Conveyance:

☒ Assignment

☐ Merger

☐ Security Agreement

☐ Change of Name

☐ Other \_\_\_\_\_

Execution Date: April 16, 1993

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: April 16, 1993

A: Patent Application No.(s)

B: Patent No.(s)

Additional numbers attached? ☐ Yes ☐ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: SIXBEY, FRIEDMAN, LEEDOM & FERGUSON, P.C.

Street Address: 2010 Corporate Ridge, Suite 600

City: McLean State: Virginia ZIP 22102

Total number of applications and patents involved: 1

Total fee (37 CFR 3.41): .....\$40.00

☒ Enclosed

☐ Authorized to be changed to deposit account

8. Deposit Account Number: \_\_\_\_\_

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Gerald J. Ferguson, Jr.

Name of Person Signing

Signature

Total number of pages comprising cover sheet: 2

Date

040 TD 05/07/93 08051313

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40.00 CK

32

REEL 6532 FRAME 66

SIXBEY, FRIEDMAN, LEEDOM & FERGUSON, P.C.  
United States Patent Rights

ATTORNEY DOCKET NO.

0756-864

08 051313

## ASSIGNMENT

Serial No. \_\_\_\_\_

Filed \_\_\_\_\_

WHEREAS, Yasuhiko TAKEMURA

Insert Name(s)  
of Inventor(s)

Insert Title of  
Invention

(hereinafter designated as the undersigned) has (have) invented certain new and useful improvements in \_\_\_\_\_

ELECTRO-OPTICAL DEVICE AND METHOD OF DRIVING THE SAME

Insert Date of  
Signing of  
Application

for which an application for Letters Patent of the United States of America has been executed by the undersigned on

April 16, 1993

; and

Insert Name of  
Assignee

WHEREAS, Semiconductor Energy Laboratory Co., Ltd.

Insert Address  
of Assignee

of 398, Hase, Atsugi-shi, Kanagawa-ken 243 Japan

its heirs, successors, legal representatives and assigns (hereinafter designated as the Assignee) is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent(s) that may be granted therefor in the United States of America;

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to the undersigned in hand paid, the receipt of which is hereby acknowledged, and other good and valuable consideration, the undersigned has (have) sold, assigned and transferred, and by these presents do sell, assign and transfer unto said Assignee the full and exclusive right to the said invention in the United States of America and its territories, dependencies and possessions and the entire right, title and interest in and to any and all Letters Patent(s) which may be granted therefor in the United States of America and its territories, dependencies and possessions, and in and to any and all divisions, reissues, continuations and extensions thereof for the full term or terms for which the same may be granted.

REEL 6532 FRAME 467

08 051313

The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or any continuation, division or reissue thereof or Letters Patent(s) or reissue patent issued thereon and to cooperate with the Assignee in every way possible in obtaining and producing evidence and proceeding with such interference.

The undersigned agree(s) to execute all papers and documents and to perform any act which may be necessary in connection with claims under or provisions of the International Convention for the Protection of Industrial Property or similar agreements.

The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent(s) to the Assignee and to vest all rights therein hereby conveyed to said Assignee as fully and entirely as the same would have been held by the undersigned if this Assignment and sale had not been made.

The undersigned hereby authorize(s) and request(s) the Commissioner of Patents and Trademarks to issue any and all Letters Patents of the United States of America resulting from said application or any division or divisions or continuing or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) the full right to convey the entire interest herein assigned, and that he has (they have) not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grant(s) the law firm of Sixbey, Friedman, Leedom & Ferguson, P.C. the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

*In witness whereof*, this Assignment has been executed by the undersigned on the date(s) opposite the undersigned name(s).

REEL 6532 FRAME 468

Date April 16, 1993 Name of Inventor Yasuhiko TAKEMURA (signature) (SEAL)  
Date \_\_\_\_\_, Name of Inventor \_\_\_\_\_ (signature) \_\_\_\_\_ (SEAL)  
Date \_\_\_\_\_, Name of Inventor \_\_\_\_\_ (signature) \_\_\_\_\_ (SEAL)  
Date \_\_\_\_\_, Name of Inventor \_\_\_\_\_ (signature) \_\_\_\_\_ (SEAL)  
Date \_\_\_\_\_, Name of Inventor \_\_\_\_\_ (signature) \_\_\_\_\_ (SEAL)

(This assignment should preferably be acknowledged before a United States Consul or Notary Public. If not, then the execution by the Inventor(s) should be witnessed by at least two other persons who should sign here.)

RECORDED  
[PATENT AND TRADEMARK]  
OFFICE

Witness \_\_\_\_\_ (name) \_\_\_\_\_ (signature)  
Witness \_\_\_\_\_ (name) \_\_\_\_\_ (signature)  
Witness \_\_\_\_\_ (name) \_\_\_\_\_ (signature)

APR 23 1993

# DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

ATTORNEY DOCKET NO.

PLEASE NOTE:  
YOU MUST  
COMPLETE THE  
FOLLOWING:

Insert Title

As a below named inventor, I hereby declare that: my residence, post office address and citizenship are as stated next to my name; that I verily believe that I am the original, first and sole inventor (if only one name is listed below) or a joint inventor (if plural inventors are named below) of the invention entitled: \* ELECTRO-OPTICAL DEVICE AND METHOD OF DRIVING  
THE SAME

\_\_\_\_\_, the specification of which is attached hereto unless the following box is checked:

Check Box If  
Appropriate —  
For Use Without  
Specification  
Attached

☐ The specification was filed on \_\_\_\_\_  
and was assigned Serial No. \_\_\_\_\_  
and was amended on \_\_\_\_\_  
(if known) (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I do not know and do not believe the same was ever known or used in the United States of America before my or our invention thereof, or patented or described in any printed publication in any country before my or our invention thereof, or more than one year prior to this application, that the same was not in public use or on sale in the United States of America more than one year prior to this application, that the invention has not been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months prior to this application, and that no application for patent or inventor's certificate on this invention has been filed in any country foreign to the United States of America prior to this application by me or my legal representatives or assigns, except as follows:

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and checked at right:

Prior Foreign Application(s)

Priority Claimed

Insert Priority  
Information  
(if appropriate)

4-135865 (Number)	JAPAN (Country)	April 28, 1992 (Month/Day/Year Filed)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
_____ (Number)	_____ (Country)	_____ (Month/Day/Year Filed)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
_____ (Number)	_____ (Country)	_____ (Month/Day/Year Filed)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
_____ (Number)	_____ (Country)	_____ (Month/Day/Year Filed)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
_____ (Number)	_____ (Country)	_____ (Month/Day/Year Filed)	<input type="checkbox"/> Yes	<input type="checkbox"/> No

All Foreign Applications, if any, for any Patent or Inventor's Certificate Filed More Than 12 Months Prior To The Filing Date of This Application:

Country	Application No.	Date of Filing (Month/Day/Year)
_____	_____	_____

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

(Application Serial No.)	(Filing Date)	(Status—patented, pending, abandoned)
_____	_____	_____
(Application Serial No.)	(Filing Date)	(Status—patented, pending, abandoned)
_____	_____	_____

I hereby appoint the following attorneys to prosecute this application and/or an international application and to transact all business in the Patent and Trademark Office connected therewith:

Daniel W. Sixbey (Reg. No. 20,932)  
Stuart J. Friedman (Reg. No. 24,312)  
Charles M. Leedom, Jr. (Reg. No. 26,477)

Gerald J. Ferguson, Jr. (Reg. No. 23,016)  
David S. Safran (Reg. No. 27,997)  
Thomas W. Cole (Reg. No. 28,290)

Send Correspondence to:

PLEASE NOTE:  
YOU MUST  
COMPLETE THE  
FOLLOWING

SIXBEY, FRIEDMAN, LEEDOM & FERGUSON, P.C.  
2010 Corporate Ridge, Suite 600  
McLean, Virginia 22102  
Telephone: (703) 790-9110

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Insert Name  
of Non-U.S.  
firm, attorney  
or agent

The undersigned hereby authorize any U. S. attorney or agent named herein to accept and follow instructions from \_\_\_\_\_ as to any action to be taken in the Patent and Trademark Office regarding this application without direct communication between the U. S. attorney or agent and the undersigned. In the event of a change in the persons from whom instructions may be taken, the U.S. attorneys or agents named herein will be so notified by the undersigned.

Insert Full Name of  
First or Sole Inventor  
and Date This  
Document Is Signed

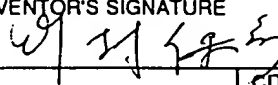
Insert Residence  
Insert Citizenship

Insert Post Office  
Address

Second Inventor:  
see above

Third Inventor:  
see above

Fourth Inventor:  
see above

FULL NAME OF SOLE OR FIRST INVENTOR	INVENTOR'S SIGNATURE	DATE
Yasuhiko TAKEMURA		4/16/1993
RESIDENCE (City, State & Country)	CITIZENSHIP	
Kanagawa, Japan	Japanese	
POST OFFICE ADDRESS (Complete Street Address including City, State & Country)		
Flat Atsugi 208, 931-1, Hase, Atsugi-shi, Kanagawa-ken 243 Japan		
FULL NAME OF SECOND JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
RESIDENCE (City, State & Country)	CITIZENSHIP	
POST OFFICE ADDRESS (Complete Street Address including City, State & Country)		
FULL NAME OF THIRD JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
RESIDENCE (City, State & Country)	CITIZENSHIP	
POST OFFICE ADDRESS (Complete Street Address including City, State & Country)		
FULL NAME OF FOURTH JOINT INVENTOR, IF ANY	INVENTOR'S SIGNATURE	DATE
RESIDENCE (City, State & Country)	CITIZENSHIP	
POST OFFICE ADDRESS (Complete Street Address including City, State & Country)		

RECORDATION FORM COVER SHEET

Docket: 0756-864

To the Honorable Commissioner of Patent and Trademarks. Please record the attached original documents or copy thereof.

1. Name of conveying party: Yasubiko TAKEMURA

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

2. Name and address of receiving party(ies):

Name: Semiconductor Energy Laboratory Co., Ltd.

Street Address: 398, Hase, Atsugi-shi, Kanagawa-ken 243 Japan

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

Additional name(s) & addresses(es) attached? ☐ Yes ☐ No

3. Name of Conveyance:

☒ Assignment

☐ Merger

☐ Security Agreement

☐ Change of Name

☐ Other \_\_\_\_\_

Execution Date: April 16, 1993

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: April 16, 1993

A: Patent Application No.(s)

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☐ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: SIXBEY, FRIEDMAN, LEEDOM & FERGUSON, P.C.

Street Address: 2010 Corporate Ridge, Suite 600

City: McLean State: Virginia ZIP 22102

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41): .....\$40.00

☒ Enclosed

☐ Authorized to be changed to deposit account

3. Deposit Account Number: \_\_\_\_\_

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*

Gerald J. Ferguson, Jr.

Name of Person Signing

Signature

Total number of pages comprising cover sheet: 1

Date

4/21/93



SIXBEY, FRIEDMAN, LEEDOM & FERGUSON, P.C.  
United States Patent Rights

ATTORNEY DOCKET NO.

0756-864

## ASSIGNMENT

Serial No. \_\_\_\_\_

Filed \_\_\_\_\_

WHEREAS, Yasuhiko TAKEMURA

Insert Name(s)  
of Inventor(s)

Insert Title of  
Invention

(hereinafter designated as the undersigned) has (have) invented certain new and useful improvements in \_\_\_\_\_

ELECTRO-OPTICAL DEVICE AND METHOD OF DRIVING THE SAME

Insert Date of  
Signing of  
Application

for which an application for Letters Patent of the United States of America has been executed by the undersigned on

April 16, 1993

; and

Insert Name of  
Assignee

WHEREAS, Semiconductor Energy Laboratory Co., Ltd.

Insert Address  
of Assignee

of 398, Hase, Atsugi-shi, Kanagawa-ken 243 Japan

its heirs, successors, legal representatives and assigns (hereinafter designated as the Assignee) is desirous of acquiring the entire right, title and interest in and to said invention and in and to any Letters Patent(s) that may be granted therefor in the United States of America;

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to the undersigned in hand paid, the receipt of which is hereby acknowledged, and other good and valuable consideration, the undersigned has (have) sold, assigned and transferred, and by these presents do sell, assign and transfer unto said Assignee the full and exclusive right to the said invention in the United States of America and its territories, dependencies and possessions and the entire right, title and interest in and to any and all Letters Patent(s) which may be granted therefor in the United States of America and its territories, dependencies and possessions, and in and to any and all divisions, reissues, continuations and extensions thereof for the full term or terms for which the same may be granted.

The undersigned agree(s) to execute all papers necessary in connection with this application and any continuing, divisional or reissue applications thereof and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient.

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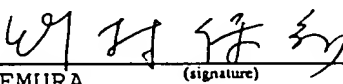
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The undersigned hereby authorize(s) and request(s) the Commissioner of Patents and Trademarks to issue any and all Letters Patents of the United States of America resulting from said application or any division or divisions or continuing or reissue applications thereof to the said Assignee, as Assignee of the entire interest, and hereby covenants that he has (they have) the full right to convey the entire interest herein assigned, and that he has (they have) not executed, and will not execute, any agreement in conflict herewith.

The undersigned hereby grant(s) the law firm of Sixbey, Friedman, Leedom & Ferguson, P.C. the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the rules of the U.S. Patent and Trademark Office for recordation of this document.

*In witness whereof*, this Assignment has been executed by the undersigned on the date(s) opposite the undersigned name(s).

Date April 16, 1993 Name of Inventor Yasuhiko TAKEMURA  (signature) (SEAL)

Date \_\_\_\_\_, Name of Inventor \_\_\_\_\_ (signature) (SEAL)

Date \_\_\_\_\_, Name of Inventor \_\_\_\_\_ (signature) (SEAL)

Date \_\_\_\_\_, Name of Inventor \_\_\_\_\_ (signature) (SEAL)

Date \_\_\_\_\_, Name of Inventor \_\_\_\_\_ (signature) (SEAL)

(This assignment should preferably be acknowledged before a United States Consul or Notary Public. If not, then the execution by the Inventor(s) should be witnessed by at least two other persons who should sign here.)

Witness \_\_\_\_\_ (name) \_\_\_\_\_ (signature)

Witness \_\_\_\_\_ (name) \_\_\_\_\_ (signature)

Witness \_\_\_\_\_ (name) \_\_\_\_\_ (signature)